



North American Refractories Co.

A Member of The Didier Group

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01/06/91

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500 Halle Building
1228 Euclid Avenue
Cleveland, Ohio 44115-1809
216/621-5200

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NORTH AMERICAN REFRACTORIES PRODUCT SAFETY DATA SHEET

MANUFACTURER

NORTH AMERICAN REFRACTORIES

MSDS # 1023-00

Vendor:

Emergency Phone Number
East (814) 236-3890
West (415) 432-4741
Canada (416) 765-4404

MSDS prepared by:
NORTH AMERICAN REFRACTORIES
Technical Center (814) 234-7981

Date Issued: 01/06/91 Date Revised: 08/02/90
Product Type: Refractory Brick Shape - Alumina Silica
Trade Name: CARNEGIE
Product SARA Hazard Class: (2) Delayed or Chronic
WHMIS Hazard Class (CANADA): Class D - Division 2: Toxic Material (CPR 60)

***** SECTION I - PRODUCT IDENTIFICATION *****

Chemical Name: Fireclay Brick
Chemical Family: Al₂O₃, SiO₂

***** SECTION II - CHEMICAL COMPOSITION *****

Hazardous Ingredients:	CAS Number:	PCT:
Crystalline Silica including:	N/A	10.0 - 30.0%
Quartz	14808-60-7	
Cristobalite	14464-46-1	
Tridymite	15468-32-3	
Other Ingredients:	CAS Number:	PCT:
Alumina Silicate	1302-93-8	60.0 - 100.0%

***** SECTION III - PHYSICAL DATA *****

Appearance and Odor: Tan brick shapes, odorless
Odor threshold (p.p.m.): Not applicable.
Specific Gravity: Not available.
Vapor Pressure (mm): Not applicable.
Vapor Density (air=1): Not applicable.
Boiling Point (°F): Greater than 1000°F
Solubility in Water: Nil.
% Volatile (by weight): None.

USEPA SF



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pH: 5 to 9 range

Density: 2 to 3 gm/cc.

Coefficient of Water/Oil Distribution: Not applicable.

***** SECTION IV - FIRE AND EXPLOSION HAZARD *****

Flammability: This product is non-flammable and will not support combustion.

***** SECTION V - HEALTH HAZARD *****

Threshold Limit Value: For respirable dust containing crystalline silica:

OSHA :

ACGIH: Quartz.....0.1mg/m³Cristobalite....0.05mg/m³Tridymite.....0.05mg/m³

For all ingredients not listed above:

OSHA:.....10mg/m³ total dustACGIH:.....10mg/m³ total dust

Effects of Overexposure: Chronic exposure to dust could cause pulmonary problems.

CRYSTALLINE SILICA:

Chronic overexposure to dust containing respirable sized crystalline silica (quartz, cristobalite, and tridymite) can cause delayed lung injury (silicosis).

Points of attack: Respiratory system and lungs.

Route of entry: Inhalation.

Inhalation of dust containing crystalline silica may contribute to pre-existing pulmonary diseases such as asthma and lung disorders associated with the smoking of tobacco.

Some recent animal studies have caused the International Agency for Research on Cancer (IARC) to categorize crystalline silica as a 2A carcinogen. A 2A carcinogen is one which:

- (1) there is sufficient evidence for the carcinogenicity to experimental animals.
- (2) there is limited evidence of the carcinogenicity to humans.

Toxicity data:

Quartz: LCLo: 300ug/m³ / 10Y-I
inhalation human

Cristobalite: TCLo: 16 mppcf/8H/17.9Y-I
inhalation human

Tridymite: TCLo: 16 mppcf/8H/17.9Y-I
inhalation human

Note: LD50 and LCS0 not available.

For more information on crystalline silica refer

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to:

- (1) IARC Monograph, Volume 42
- (2) NIOSH Document No. 75-120

CARCINOGENICITY INFORMATION

With the exception of:

Crystalline silica

No ingredient in this product is found on either the Federal OSHA, NTP, or IARC list of carcinogens.

Emergency and First Aid Data:

Eyes: Flush with water and get medical help.

Skin: Wash thoroughly with soap and water.

Inhalation: Remove to fresh air.

SECTION VI - REACTIVITY DATA

Stability and Reactivity: This product is stable and non-reactive.

Hazardous Decomposition: Crystalline silica levels in used refractories may be higher or lower than as-shipped depending on service conditions. Hygiene monitoring must be done to insure the proper employee protection during tearout.

SECTION VII - SPILL AND LEAK PROCEDURES

Steps to be Taken in Case of a Spill:

Avoid generating dust exposure during cleanup.

Waste Disposal Method: Dispose of material according to local, state or federal regulations and as final used condition of the product dictates.

SECTION VIII - INDUSTRIAL HYGIENE INFORMATION

Ventilation: Local exhaust recommended to maintain exposures below TLV.

Respiratory Protection: NIOSH approved dust type for exposures above TLV.

Eye Protection: Recommended.

SECTION IX - SPECIAL PRECAUTIONS

Special Precautions: Avoid dust generation.

Precautionary Labeling: Product contains crystalline silica

WARNING: Prolonged/repeated inhalation of product dust may cause delayed lung injury (silicosis)